

WHAT IS CLAIMED IS:

1. A method for facilitating access to a plurality of information resources in a computerized environment, the method comprising:
collecting data relating to the plurality of information
5 resources and determining relationships among the plurality of information resources wherein the information resources comprise information resources of a plurality of types;
determining a current focus of a user, wherein the current focus is an information resource of one of the plurality of types;
10 identifying information resources related to the current focus, the information resources related to the current focus comprising zero or more information resources of each of the plurality of types; and,
separately making available for selection by the user the
15 identified information resources of each of the plurality of types.
2. A method according to claim 1 wherein determining the current focus comprises monitoring activities of the user in the computerized environment.
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3. A method according to claim 1 wherein determining the current focus comprises receiving a user input specifying the current focus
4. A method according to claim 1 wherein collecting data relating to
25 the plurality of information resources comprises periodically collecting data on at least one of lineage, structure, content, function, applied metadata and cross-references of the plurality of information resources.
- 30 5. A method according to claim 1 wherein determining relationships among the plurality of information resources comprises identifying

information resources which are either messages in a conversation comprising a plurality of messages or are associated with messages in the conversation.

- 5 6. A method according to claim 1 wherein identifying information resources related to the current focus comprises locating information resources having at least one relationship to the current focus.
- 10 7. A method according to claim 1 wherein the plurality of types include messages, people and files.
8. A method according to claim 7 wherein the current focus comprises a focus person and identifying files relevant to the focus person comprises:
15 identifying conversations in which the focus person has participated; and,
 identifying files attached to messages in the conversations in which the focus person has participated.
- 20 9. A method according to claim 8 wherein identifying files relevant to the focus person also comprises identifying at least one file having a name similar to a name of at least one of the files attached to the messages in the conversations.
- 25 10. A method according to claim 7 wherein the current focus comprises a focus person and identifying messages relevant to the focus person comprises:
 identifying conversations in which the focus person has
30 participated; and,

identifying messages in the conversations in which the focus person has participated.

11. A method according to claim 7 wherein the current focus
5 comprises a focus person and identifying persons relevant to the focus person comprises:
identifying conversations in which the focus person has participated; and,
identifying other persons who have participated in the
10 conversations in which the focus person has participated.
12. A method according to claim 7 wherein the current focus
comprises a focus file and identifying persons relevant to the focus
file comprises:
15 identifying conversations in which the focus file has been attached to at least one message; and,
identifying persons who have participated in the conversations in which the focus file has been attached to at least one message.
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13. A method according to claim 7 wherein the current focus
comprises a focus file and identifying messages relevant to the focus file comprises:
identifying conversations in which the focus file has been
25 attached to at least one message; and,
identifying messages in the identified conversations.
14. A method according to claim 7 wherein the current focus
comprises a focus file and identifying files relevant to the focus
30 file comprises:

identifying one or more conversations in which the focus file has been attached to at least one message; and,

identifying other files which have been attached to at least one message in the identified conversations.

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15. A method according to claim 14 wherein identifying files relevant to the focus file also comprises identifying at least one file having a name similar to a name of at least one of the files attached to the messages in the identified conversations.

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16. A method according to claim 7 wherein the current focus comprises a focus message and identifying persons relevant to the focus message comprises:

15 identifying a conversation to which the focus message belongs; and,

identifying persons who have participated in the identified conversation.

17. A method according to claim 7 wherein the current focus comprises a focus message and identifying messages relevant to the focus message comprises:

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identifying a conversation to which the focus message belongs; and,

identifying other messages in the identified conversation.

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18. A method according to claim 7 wherein the current focus comprises a focus message and identifying files relevant to the focus message comprises:

30 identifying a conversation to which the focus message belongs; and,

identifying files attached to messages in the identified conversation.

19. A method according to claim 18 wherein identifying files relevant
5 to the focus file also comprises identifying at least one file having a name similar to a name of at least one of the files attached to the messages in the identified conversation.
20. A method according to claim 1 wherein identifying information
10 resources related to the current focus comprises locating information resources having a predetermined type of relationship to the current focus.
21. A method according to claim 1 wherein making the identified
15 information resources available for selection by the user comprises displaying representations of the identified information resources in a display of the computer environment.
22. A method according to claim 21 comprising automatically updating
20 the identified information as the current focus changes.
23. A method according to claim 1 wherein identifying information
resources related to the current focus comprises determining a
25 relevance of each of the information resources to the current focus.
24. A method according to claim 23 wherein determining a relevance
of each of the information resources to the current focus
30 comprises, for at least some of the information resources, examining each of a plurality of relationships between the information resource and the current focus, the plurality of

relationships including relationships of different types, assigning
different weights corresponding to the different types of
relationships and computing a relevance measure for each of the
information resources based upon the plurality of relationships and
5 the corresponding weights.

25. A method according to claim 23 wherein determining a relevance
of each of the information resources to the current focus comprises
identifying at least one conversation associated with the current
10 focus, the conversation comprising a plurality of messages, the
current focus comprising one of the messages or an information
resource associated with one of the messages in the conversation
and determining a relevance of each of the information resources
to the conversation.

15 26. A method according to claim 25 wherein each of the information
resources can have any of a plurality of roles in relation to the
messages of the conversation and determining a relevance of each
of the information resources to the conversation comprises
20 computing a raw value based on a weighted sum of the number of
times that each of the information resources has each one of the
plurality of roles in relation to the messages of the conversation.

25 27. A method according to claim 26 comprising normalizing the raw
values for each of the information resources.

28. A method according to claim 27 wherein the information resources
are persons, and the plurality of roles includes at least sending
messages in the conversation and receiving messages in the
30 conversation.

29. A method according to claim 28 wherein, in computing the weighted sum, sending messages is weighted more heavily than receiving messages.
- 5 30. A method according to claim 11 wherein identifying persons relevant to the focus person comprises determining a relevance of each of the relevant persons to the current focus person.
31. A method according to claim 30 wherein determining the
10 relevance of each of the relevant persons comprises examining one or more interactions between each of the relevant persons and the focus person wherein, in each of the interactions, the relevant persons have one or more or a plurality of roles in the interaction, providing a weighting factor corresponding to each of the plurality
15 of roles; and,
computing a relevance measure for each of the relevant persons based upon the interactions between that relevant person and the focus person, the corresponding roles of the relevant person and the corresponding weighting factors.
- 20 32. A method according to claim 31 wherein determining the relevance of each of the relevant persons comprises performing the computation:
$$(CS + (W \times CR)) / (1 + W)$$

25 or a mathematical equivalent thereof, where **CS** is a number based upon a number of times that the relevant person contributed as a sender of a message to the focus person, **CR** is a number based upon a number of times that the relevant person contributed as a receiver of messages from the focus person and **W** is a weighting
30 factor.

33. A method according to claim 1 wherein making the identified information resources available for selection by the user comprises displaying representations of the information resources in a graphical user interface.
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34. A method according to claim 8 wherein making the identified information resources available for selection by the user comprises displaying representations of the identified information resources in a graphical user interface.
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35. A method according to claim 33 wherein identifying information resources related to the current focus comprises computing a measure of relevance of each of the information resources to the current focus.
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36. A method according to claim 35 wherein displaying the representations of the identified information resources in the graphical user interface comprises displaying the representations in an order dependent upon the measures of relevance of the information resources.
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37. A method according to claim 36 wherein displaying the representations comprises displaying representations corresponding to each of the plurality of types in a corresponding one of a plurality of areas of the graphical user interface.
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38. A method according to claim 35 wherein computing the measure of relevance of each of the information resources to the current focus comprises identifying at least one conversation associated with the current focus, the conversation comprising a plurality of messages, the current focus comprising one of the messages or an
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information resource associated with one of the messages in the conversation and determining a relevance of each of the information resources to the conversation.

- 5 39. A method according to claim 38 wherein each of the information resources can have any of a plurality of roles in relation to the messages of the conversation and determining a relevance of each of the information resources to the conversation comprises
10 computing a raw value based on a weighted sum of the number of times that each of the information resources has each one of the plurality of roles in relation to the messages of the conversation.
39. A method for determining relationships between information resources in a computerized environment, said method
15 comprising:
 examining data and content regarding said information resources; and,
 inferring relationships between information resources by comparing indirect data between said information resources.
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40. A method according to claim 39 wherein said step of inferring relationships between information resources includes:
 comparing data other than the content of the information resources.
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41. A method according to claim 39 wherein inferring relationships between the information resources includes:
 comparing data other than the characteristics of the information resources.
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42. A method for organizing information relating to a user activity in a computerized environment, the method comprising:
- automatically collecting data regarding information resources available in the computerized environment;
 - 5 determining relationships between the information resources;
 - determining a user activity focus;
 - organizing each of the information resources relating to the user activity focus; and,
 - 10 determining relative relevances of the organized information resources.
43. A computer implemented system for facilitating access to a plurality of information resources in a computerized environment,
- 15 the system comprising:
- means for collecting data relating to the plurality of information resources and determining relationships among the plurality of information resources wherein the information resources comprise information resources of a plurality of types;
 - 20 means for determining a current focus of a user, wherein the current focus is an information resource of one of the plurality of types;
 - means for identifying information resources related to the current focus, the information resources related to the current focus comprising zero or more information resources of each of
 - 25 the plurality of types; and,
 - means for separately making available for selection by the user the identified information resources of each of the plurality of types.

44. A system according to claim 43 wherein the current focus comprises a focus person and the means for identifying information resources related to the current focus comprises means for identifying files relevant to the focus person, the means
5 for identifying files relevant to the focus person comprising:
 means for identifying conversations in which the focus person has participated; and,
 means for identifying files attached to messages in the conversations in which the focus person has participated.
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45. A system according to claim 44 comprising means for identifying at least one file having a name similar to a name of at least one of the files attached to the messages in the conversations.
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46. A system according to claim 43 wherein the current focus comprises a focus person and the means for identifying information resources related to the current focus comprises means for identifying messages relevant to the focus person, the means
20 for identifying messages relevant to the focus person comprising:
 means for identifying conversations in which the focus person has participated; and,
 means for identifying messages in the conversations in which the focus person has participated.
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47. A system according to claim 43 wherein the current focus comprises a focus person and the means for identifying information resources related to the current focus comprises means for identifying persons relevant to the focus person, the means for
30 identifying persons relevant to the focus person comprising:
 means for identifying conversations in which the focus person has participated; and,

means for identifying other persons who have participated in the conversations in which the focus person has participated.

48. A system according to claim 43 wherein the current focus comprises a focus file and the means for identifying information resources related to the current focus comprises means for identifying persons relevant to the focus file, the means for identifying persons relevant to the focus file comprising:
- means for identifying conversations in which the focus file has been attached to at least one message; and,
- means for identifying persons who have participated in the conversations in which the focus file has been attached to at least one message.
49. A system according to claim 43 wherein the current focus comprises a focus file and the means for identifying information resources related to the current focus comprises means for identifying messages relevant to the focus file, the means for identifying messages relevant to the focus file comprising:
- means for identifying conversations in which the focus file has been attached to at least one message; and,
- means for identifying messages in the identified conversations.
50. A system according to claim 43 wherein the current focus comprises a focus file and the means for identifying information resources related to the current focus comprises means for identifying files relevant to the focus file, the means for identifying files relevant to the focus file comprising:
- means for identifying one or more conversations in which the focus file has been attached to at least one message; and,

means for identifying other files which have been attached to at least one message in the identified conversations.

51. A system according to claim 43 wherein the current focus
5 comprises a focus message and the means for identifying
information resources related to the current focus comprises means
for identifying persons relevant to the focus message, the means
for identifying persons relevant to the focus message comprising:
means for identifying a conversation to which the focus
10 message belongs; and,
means for identifying persons who have participated in the
identified conversation.
52. A system according to claim 43 wherein the current focus
15 comprises a focus message and the means for identifying
information resources related to the current focus comprises means
for identifying messages relevant to the focus message, the means
for identifying messages relevant to the focus message comprising:
means for identifying a conversation to which the focus
20 message belongs; and,
means for identifying other messages in the identified
conversation.
53. A system according to claim 43 wherein the current focus
25 comprises a focus message and the means for identifying
information resources related to the current focus comprises means
for identifying files relevant to the focus message the means for
identifying files relevant to the focus message comprising:
means for identifying a conversation to which the focus
30 message belongs; and,

means for identifying files attached to messages in the identified conversation.

54. A system according to claim 43 comprising means for determining
5 a relevance of each of the information resources to the current focus.
55. A system according to claim 54 wherein the means for
10 determining a relevance of each of the information resources to the current focus comprises means for examining each of a plurality of relationships between the information resource and the current focus, the plurality of relationships including relationships of different types, means for assigning different weights
15 corresponding to the different types of relationships and means for computing a relevance measure for each of the information resources based upon the plurality of relationships and the corresponding weights.
56. A system for determining relationships between information
20 resources in a computerized environment, the system comprising:
a first component for examining data regarding the information resources; and,
a second component for determining explicit relationships
25 between the information resources by examining similarity of data between the information resources.
57. A system according to claim 56 wherein the first component for
30 determining explicit relationships is configured to examine characteristics of the information resources for similarity between the characteristics.

58. A system according to claim 57 wherein the first component for determining explicit relationships is configured to examine the content of the information resources for similarity between the content.
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59. A system for determining relationships between information resources in a computerized environment, the system comprising:
a first component for examining data and content regarding the information resources; and
10 a second component for inferring relationships between information resources by comparing indirect data between the information resources.
60. A system according to claim 59 wherein the first component for inferring relationships between information resources is configured to compare data other than the content of the information resources.
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61. A system according to claim 59 wherein the component for inferring relationships between information resources is configured to compare data other than the characteristics of the information resources.
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62. A system according to claim 59 wherein the component for inferring relationships between information resources is configured to infer relationships between the information resources based on observations of the information resources.
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63. A system according to claim 59 wherein the component for inferring relationships between information resources is configured
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to infer relationships between the information resources based on attributes about the information resources.

- 5 64. A system according to claim 59 wherein the component for inferring relationships between information resources is configured to infer relationships between the information resources based on assumptions of the information resources.